

In The Claims

Please replace claims 1 and 2 with the following amended claim 1 and 2, cancel claim 5 and add new claims 16 - 24.

1. (Once Amended) A printed wiring board comprising:

an insulator board having a via-hole;

a pair of conductor patterns formed on the insulator board; and

a unified conductive compound provided in the via-hole and electrically interconnecting the pair of conductor patterns,

A2 wherein a sidewall of the unified conductive compound in the via-hole has a shape in such a manner that the farther from the conductor patterns on the sidewall, the closer to a center axis of the via-hole;

the pair of conductor patterns including a metal;

the unified conductive compound comprises a first metal and a second metal having a higher melting point than a heating temperature required for interconnecting the conductor patterns; and

the conductor patterns are electrically interconnected using solid phase diffusion layers that are formed by mutual solid phase diffusion between the same metal as the metal in the conductor patterns and the same metal as the first metal in the conductive compound.

2. (Once Amended) The printed wiring board as in claim 1, wherein the side wall of the conductive compound has an arch shape on a cross-sectional plane passing through a center axis of the via-hole.

A3 16. (New Claim) The printed wiring board as in claim 1, wherein the first metal is tin and the second metal is silver.

17. (new Claim) A printed wiring board comprising:

an insulator board having a via-hole;
a pair of conductor patterns, which include a metal and are formed on the insulator board;
a unified conductive compound, which includes a first metal and a second metal that has a higher melting point than a heating temperature required for interconnecting the conductor patterns; and

A3 a pair of solid phase diffusion layers, which are formed by mutual solid phase diffusion between the same metal as the metal included in the conductor patterns and the same metal as the first metal included in the conductive compound, wherein the conductor patterns are electrically interconnected by the unified conductive compound and the solid phase diffusion layers.

18. (New Claim) The printed wiring board as in claim 17, wherein the conductive compound is an alloy that includes sintered metals made from metal particles.

19. (New Claim) The printed wiring board as in claim 17, wherein the metal is tin and the second metal is silver.

20. (New Claim) A printed wiring board comprising:

an insulator board having a via-hole;

a pair of conductor patterns, which include a metal and are formed on the insulator board;

and

a unified conductive compound, which includes a first metal and a second metal that has a higher melting point than a heating temperature required for interconnecting the conductor pattern, wherein:

the conductive compound is an alloy that includes sintered metals made from metal particles including the first metal and other metal particles including the second metal; and

the conductor patterns are electrically interconnected by the unified conductive compound.

21. (New Claim) The printed wiring board as in claim 20, wherein the first metal is tin and the second metal is silver.

22. (New Claim) The printed wiring board as in claim 20, wherein in a sidewall of the unified conductive compound in the via-hole has a shape such that the farther from the conductor patterns on the sidewall, the closer the sidewall is to a center axis of the via-hole.

23. (New Claim) The printed wiring board of claim 1 wherein the shape of the sidewall of the unified conductive compound follows a protrusion of the insulator board that increases toward the center axis with increasing distance from the conductor patterns along the sidewall.

A3 24. (New Claim) The printed wiring board of claim 1 wherein the sidewall of the unified
conductive pattern is inclined with respect to the conductor patterns, wherein stress
concentrations are avoided at an area of an electrical contact between the conductive patterns and
the unified conductive compound.